UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
KISS, ERIC B

ART UNIT	PAPER NUMBER
2192	

DATE MAILED: 06/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/864,829	WERME ET AL.
	Examiner	Art Unit	
	Eric B. Kiss	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>24 May 2001</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-37</u> is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-37</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>24 May 2001</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some *   c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-37 have been examined.

Drawings

2.   New corrected drawings in compliance with 37 CFR 1.121(d) are required in this

application because several of the figures do not comply with the standards set forth in 37 CFR

1.84. A few examples of noted problems include:

the drawings contain regions of solid or otherwise dark shading that interfere with their

comprehension and reproducibility;

the drawings contain lead lines that intersect with each other and intersect with text,

reducing legibility; and

the drawings contain characters which are not black, sufficiently dense and dark, and

uniformly thick and well-defined.

Applicant is advised to employ the services of a competent patent draftsperson outside

the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. Corrected

drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to

avoid abandonment of the application. Any amended replacement drawing sheet should include

all of the figures appearing on the immediate prior version of the sheet, even if only one figure is

being amended. The figure or figure number of an amended drawing should not be labeled as

"amended." If a drawing figure is to be canceled, the appropriate figure must be removed from

the replacement sheet, and where necessary, the remaining figures must be renumbered and

appropriate changes made to the brief description of the several views of the drawings for

consistency. Additional replacement sheets may be necessary to show the renumbering of the

remaining figures. Each drawing sheet submitted after the filing date of an application must be

labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR

1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and

informed of any required corrective action in the next Office action. The objection to the

drawings will not be held in abeyance.

Specification

3.   The use of trademarks, such as WINDOWS, UNIX, SOLARIS, LINUX, IRIX, and

WINDOWS NT, has been noted in this application. Trademarks should be capitalized wherever

they appear (capitalize each letter or accompany the trademark with an appropriate designation

symbol, *e.g.*, ™ or ®) and be accompanied by the generic terminology (use trademarks as

adjectives modifying a descriptive noun).

The specification may contain additional trademarks not mentioned above. Applicant

should carefully review the specification and make all necessary changes.

Although the use of trademarks is permissible in patent applications, the proprietary

nature of the marks should be respected and every effort made to prevent their use in any manner

which might adversely affect their validity as trademarks.

Claim Objections

4.   Claim1 is objected to because of the following informalities: "methed" in line 1 should

read --method--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this
> or a foreign country, before the invention thereof by the applicant for a patent.

6.   Claims 1-4, 6, 7, 12, 17, 19-22, 24, 25, 30, 35, and 37 are rejected under 35 U.S.C. 102(a)

as being anticipated by Matthias Brune, et al., "A Resource Description Environment for

Distributed Computing Systems," IEEE, Proc. of 8th International Symposium on High

Performance Distributed Computing HPDC-8, 1999, pp. 279-286 (hereinafter [Brune99]).

As per claim 1, [Brune99] discloses preparing specification files in a language providing

a syntax adapted to describe application, system and network specification information (see, for

example, section 4 on pp. 281-282); compiling the specification files to thereby generate

specification objects (see, for example, section 4.3 on p. 282); and providing an application

programming interface (API) permitting the functional elements to access the specification

information using API calls (see, for example, section 6.1 on pp. 283-284).

As per claim 2, [Brune99] discloses preparing first specification files in a language

providing a syntax adapted to describe system and network specification information (see, for

example, section 4 on pp. 281-282); preparing second specification files in the language

providing application software system structure, capabilities, dependencies, and requirements for

the M managed characteristic applications (see, for example, section 4 on pp. 281-282);

compiling the first and second specification files to thereby generate specification objects (see,

for example, section 4.3 on p. 282); and providing an application programming interface (API)

permitting the functional elements to access the specification information using API calls (see,

for example, section 6.1 on pp. 283-284).

As per claim 20, [Brune99] discloses preparing first specification files in a language

providing a syntax adapted to describe system and network specification information (see, for

example, section 4 on pp. 281-282); preparing second specification files in the language

providing application software system structure, capabilities, dependencies, and requirements for

the M managed characteristic applications (see, for example, section 4 on pp. 281-282);

compiling the first and second specification files to thereby generate specification objects

organized into a system specification library (see, for example, section 4.3 on p. 282); and

linking the program control function and the resource manager function to the system

specification library (see, for example, section 6 on pp. 283-285).

As per claims 3 and 21, [Brune99] further discloses the second specification files

describing the application software system structure in terms of systems, subsystems, paths,

applications and processes (see, for example, section 4 on pp. 281-282).

As per claims 4 and 22, [Brune99] further discloses the second specification files further

providing Quality of Service (QoS) requirements on an event basis (see, for example, section 4

on pp. 281-282).

As per claims 6 and 24, [Brune99] further discloses the second specification files further

providing data flow path requirements in terms of both structure and Quality of Service (QoS)

requirements for the M managed characteristic applications (see, for example, section 4 on pp.

281-282).

As per claims 7 and 25, [Brune99] further discloses one of the M managed characteristic

applications comprising a scalable application (see, for example, section 4 on pp. 281-282).

As per claims 12 and 30, [Brune99] further discloses the second specification files

providing environmental variables associated with the M managed characteristic applications

(see, for example, section 4 on pp. 281-282).

As per claims 17 and 35, [Brune99] further discloses the second specification files

providing application states defined in terms of received instrumentation data values, the length

of time a respective application has been running, and/or the set of processes that are currently

running (see, for example, section 4 on pp. 281-282).

As per claims 19 and 37, [Brune99] further discloses one of the M managed characteristic

applications comprising a scalable application (see, for example, section 4 on pp. 281-282); and

one of the second specification files identifying the type of scalability practiced by the scalable

application (see, for example, section 4 on pp. 281-282).

Claim Rejections - 35 USC § 103

7. ·   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 5, 8, 23, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over

[Brune99], as applied above to claims 2 and 20, and further in view of Brendan Jennings, et al.,

"FIPA-compliant agents for real-time control of Intelligent Network traffic," 1999, Elsevier

Science B.V., Computer Networks 31, pp. 2017-2036 (hereinafter [Jennings99]).

As per claims 5, 8, 23 and 26, although [Brune99] fails to expressly disclose the second

specification files further providing survivability requirements for the M managed characteristic

applications or one of the M managed characteristic applications comprising a fault tolerant

application, where the degree of fault tolerance is selectable by a user, [Jennings99] teaches

survivability requirements, in terms of an explicitly specified fault tolerance in the form of

specification language (ACL) extensions (see, for example, section 5.3.2.1 on p. 2033).

Therefore, it would have been obvious to one of ordinary skill in the computer art at the time the

invention was made to modify the methods of [Brune99] to include such survivability/fault-

tolerance specifications as per the teachings of [Jennings99]. One would be motivated to do so

to provide a fundamental property of real-time systems.

9.   Claims 9 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over

[Brune99], as applied above to claims 2 and 20, and further in view of U.S. Patent No. 6,578,005

to Lesaint et al.

As per claims 9 and 27, [Brune99] discloses such methods but fails to expressly disclose

one of the M managed characteristic applications comprising a selectable priority application.

However, *Lesaint et al.* teaches such selectable priority in the context of a resource allocator (see, for example, col. 12, line 52, through col. 13, line 9). Therefore, it would have been obvious to one of ordinary skill in the computer art at the time the invention was made to modify the methods of [Brune99] to include such selectable priority as per the teachings of *Lesaint et al.* One would be motivated to do so, for example, to ensure that safety-critical tasks are handled in an expedited manner.

10.   Claims 10, 11, 15, 16, 18, 28, 29, 33, 34, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over [Brune99], as applied above to claims 2 and 20, and further in view of Karl Czajkowski, et al., "A Resource Management Architecture for Metacomputing Systems," Proc. of 4th IPPS/SPDP Workshop on Job Scheduling Strategies for Parallel Processing, 1998, 19 pages (hereinafter [Czajkowski98]).

As per claims 10, 11, 15, 16, 28, 29, 33, and 34, although [Brune99] fails to expressly disclose identifying script files/signals associated with shut down of a managed characteristic application or the specification files providing startup and shutdown dependencies, [Czajkowski98] teaches such startup/shutdown handling (see, for example, section 5 on pp. 10-13), and thus, it would have been obvious to one of ordinary skill in the computer art at the time the invention was made to modify the methods of [Brune99] to include such handling. One would be motivated to do so, for example, to provide for accurate updates of resource status and availability for efficient scheduling.

As per claims 18 and 36, [Brune99] further discloses one of the M managed characteristic applications comprising a scalable application (see, for example, section 4 on pp. 281-282).

[Brune99] fails to expressly disclose one of the second specification files identifying whether the

scalable application can be restarted upon failure and the minimum and maximum number of

copies of the scalable application that can be instantiated in the distributed environment.

However, [Czajkowski98] teaches specifying copy counts for scalable applications (see, for

example, section 4 on pp. 8-10) and further suggests specifying restart conditions in the event of

failures (see, for example, the last paragraph of section 7 on p. 17). Therefore, it would have

been obvious to one of ordinary skill in the computer art at the time the invention was made to

modify the methods of [Brune99] to include such count information and failure handling as per

the teachings of [Czajkowski98]. One would be motivated to do so, for example, to promote

efficient resource allocation and provide compensation for scheduling failures.

11.   Claims 13, 14, 31, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over

[Brune99], as applied above to claims 2 and 20.

As per claims 13, 14, 31, and 32, [Brune99] teaches as an alternate embodiment (related

work) providing command line arguments (requiring resolution at application runtime)

associated with the M managed characteristic applications (see, for example, section 2 on pp.

279-280). Therefore, it would have been obvious to one of ordinary skill in the computer art at

the time the invention was made to modify the methods of [Brune99] to include such related

techniques, for example, as a means to efficiently handle dynamic information.

Conclusion

12.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13.   Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric B. Kiss whose telephone number is (571) 272-3699. The Examiner can normally be reached on Tue. - Fri., 7:00 am - 4:30 pm. The Examiner can also be reached on alternate Mondays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Tuan Dam, can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature should be directed to the TC 2100 Group receptionist: 571-272-2100.

WEI Y. ZHEN
PRIMARY EXAMINER

EBK /EBK
June 20, 2005